Philadelphia University Faculty of Allied medical Sciences	PHILADELPHIA UNIVERSITY THE WAY TO THE FUTURE	Approval date:
		Issue:
Department of Clinical Nutrition and Dietetics		Credit Hours: 2
Academic year 2025/2026	Course Syllabus	Bachelor

Course information

Course#	Course title		Prerequisite
1110220	Food Chemistry and Analysis		(Analytical Chemistry) 0216241
Course type		Class time	Room #
☐ University Requirement ☐ Faculty Requirement ☒ Major Requirement ☐ Elective ☒ Compulsory		9:45-10:35 Sat- Mon	61203

Instructor Information

Name	Office No.	Phone No.	Office Hours	E-mail
Dr. Bayan AL-Tarifi	61212	2434	Sat, Tue (12:15-1:05) Sun (9:45-10:35) Mon (11:15- 1:05) Tue (12:15-2:05)	baltarifi@philadelphia.edu.jo

Course Delivery Method

Course Delivery Method			
☒ Physical	☐ Online		☐ Blended
Learning Model			
Percentage	Ssynchronous	Asynchronous	Physical
			%100

Course Description

This course covers the major and many of the minor food components with respect to their chemical classification, structure, occurrence, properties and functions. Chemical Changes due to handling, storage, preservation and processing are also emphasized. Colloids and their importance in foods are also covered.

Course Learning Outcomes

Number	Outcomes	Corresponding Program outcomes
Knowledge		
K1	Identify basic information on the composition of foods (water, colloids, proteins, carbohydrates, lipids, enzymes and natural pigments), and the chemical and physical characteristics they undergo during processing, storage, and	KP1

	handling.	
K2	Demonstrate the analytical techniques associated with foods.	**KP1**

Learning Resources

Course textbook	1. Deman, J.M., 2018. Principle of Food Chemistry, 4th edition, Aspen Publication Inc, Gaithersburg, Maryland, USA. 2. Nielsen, S.S., 2019. Food analysis, 5th edition, Springer, Germany. 3. Nielsen, S.S., 2017. Food analysis laboratory manual, 3th edition, Springer, Germany. 4. Lab manual.
Supporting References	5. Lecture notes, handouts & articles 6. Fenema, O. (editor) 1996. Food Chemistry 3rd ed. Marcel Dekker, New York, USA. 7. Food Analysis: Theory and Practice. Pomeranz and Meloan, 3rd. ed., 1994. 8. Official methods of analysis- AOAC (22nd ed)
Supporting websites	http://arborcom.com www.nal.usda.gov/finc www.eatright.org www.cyberdiet.com navigator.tufts.edu
Teaching Environment	☒**Classroom** ☒ **laboratory** ☐**Learning platform** ☐**Other**

Meetings and subject's timetable

Week	Topic	Learning Methods	Tasks	Learning Material
1	**Water and Colloids** -Definition, chemistry, solutions types	Lecture, collaborative learning		Ref 1, 2
2	**Minerals and Ash**	Lecture, collaborative learning	Assignment	Ref 1, 2
3-5	**Proteins:** -Definition, Structure and classification, physical and chemical properties	Lecture, collaborative learning	Quiz	Ref 1, 2
6-8	**Carbohydrates:** -Structure, Classification, Reactions properties.	Lecture, collaborative learning	Quiz	Ref 1, 2
Midterm Exam				
9-11	**Lipids:** -Definition, Classification, Structure and classification, properties and characteristics	Lecture, collaborative learning	Assignment Quiz	Ref 1, 2
12-13	**Enzymes:** -Definition, properties, functions	Lecture, collaborative learning	Assignment	Ref 1, 2
14-15	**Natural pigments:** -Classification, properties	Lecture	Assignment	Ref 1, 2

16	**Final Exam**				

Course Contributing to Learner Skill Development

Using Technology
Using different scientific websites to collect data about food analysis
Communication skills
Prepare reports about one selected topic in food chemistry, collaborative learning
Application of concepts learned
Calculation of nutrient content after analysis

Assessment Methods and Grade Distribution

Assessment Methods	Grade Weight	Assessment Time (Week No.)	Link to Course Outcomes
Mid Term Exam	**% 30**	**8th week**	**K1**
Various Assessments *	**% 20**	**Continuous**	**K1, K2**
Quizzes	**% 10**		
Final Exam	**% 40**	**16th week**	**K1,K2**
Total	**%100**	**100%**	

* Includes: quiz, in class and out of class assignment, presentations, reports, group or individual projects.

Alignment of Course Outcomes with Learning and Assessment Methods

Number	Learning Outcomes	Learning Method*	Assessment Method**
Knowledge			
K1	Understand basic information on the composition of foods (water, colloids, proteins, carbohydrates, lipids, enzymes and natural pigments), and the chemical and physical characteristics they undergo during processing, storage, and handling.	Lecture Collaborating learning	Assignment Quiz Exam
K2	Demonstrate the analytical techniques associated with foods.	Lecture Collaborating learning	Assignment Quiz Exam

* Includes: Lecture, flipped Class, project- based learning, problem solving based learning, collaborative learning
** includes: quiz, in class and out of class assignment, presentations, reports, videotaped assignment, group or individual projects.

Course Polices

Policy	Policy Requirements
Passing Grade	The minimum passing grade for the course is (50%) and the minimum final mark recorded on transcript is (35%).
Missing Exams	• Missing an exam without a valid excuse will result in a zero grade to be assigned to the exam or assessment. • A Student who misses an exam or scheduled assessment, for a legitimate reason, must submit an official written excuse within a week from an exam or assessment due date. • A student who has an excuse for missing a final exam should submit the excuse to the dean within three days of the missed exam date.

Attendance	The student is not allowed to be absent more than (15%) of the total hours prescribed for the course, which equates to six lectures days (M, W) and seven lectures (S,T,R). If the student misses more than (15%) of the total hours prescribed for the course without a satisfactory excuse accepted by the dean of the faculty, s/he will be prohibited from taking the final exam and the grade in that course is considered (zero), but if the absence is due to illness or a compulsive excuse accepted by the dean of the college, then withdrawal grade will be recorded.
Academic Honesty	Philadelphia University pays special attention to the issue of academic integrity, and the penalties stipulated in the university's instructions are applied to those who are proven to have committed an act that violates academic integrity, such as: cheating, plagiarism (academic theft), collusion, and violating intellectual property rights.

Program Learning Outcomes to be Assessed in this Course

Number	Learning Outcome	Course Title	Assessment Method	Target Performance level
KP1	Demonstrate a depth understanding of the basis of nutritional science and the nutrient composition of food, and discover the links between diet and disease and health and the social/ethical factors which impinge on diet and health.	Food chemistry and analysis	MCQs (10 marks included in the final exam	%100 of students will achieve 6 and more

Description of Program Learning Outcome Assessment Method

Number	Detailed **Description of Assessment**
KP1	MCQs (10 question included in the final exam)

Rubric for the assignment assessment

	4 pts	3 pts	2 pts	1 pts
Completion How much of the assignment was completed?	The entire assignment was completed	3/4 of the assignment was completed	At least 1/2 of the assignment was completed.	Less than 1/2 of the assignment was completed.
Accuracy How much of the assignment was done right?	The entire assignment (or almost all) of the assignment was done correctly.	3/4 of the assignment was done correctly.	At least 1/2 of the assignment was done correctly.	Less than 1/2 of the assignment was done correctly.
Legibility/ Neatness Can the work pass the stranger test?	Very neat. Writing illustrates a lot of thought and preparation.	Mostly neat and legible Writing illustrates some thought and preparation.	Slightly legible. Writing illustrates little thought or preparation.	Not legible Hard to read. Ideas expressed are difficult to understand.
Directions Did you follow directions? Was the assignment completed showing all work?	The assignment was done showing lots of work neatly and easily followed.	The assignment was done showing most of the work.	The assignment was done showing some work	The assignment was answers only.
Effort The student worked at what level of their ability?	Excellent effort with a brief/ complete interpretation	Good effort was made and the student met my expectations.	Some effort was made, The student just did enough work.	Minimal effort was given. The student should try harder.

Time Management Was the assignment turned in on time?	The assignment was turned in on time.	The assignment was turned in one day late.	The assignment was turned in two days late.	The assignment was turned in more than two days late.
Total: 36 converted to 20				